#7

1638



RAW SEQUENCE LISTING DATE: 11/08/2000
PATENT APPLICATION: US/09/522,334 TIME: 10:46:48

Input Set : A:\4257-0018.30-SEQLIST.TXT
Output Set: N:\CRF3\11082000\I522334.raw



<110> APPLICANT: Wagner, Ry
Mathews, Helena
Liu, Xing Liang
Waggoner, Wency J.
<120> TITLE OF INVENTION: TRAIT-ASSOCIATED GENE IDENTIFICATION METHOD
<130> FILE REFERENCE: 4257-0018.30
<140> CURRENT APPLICATION NUMBER: 09/522,334
<141> CURRENT FILING DATE: 2000-03-09
<150> PRIOR APPLICATION NUMBER: US 60/124,232
<151> PRIOR FILING DATE: 1999-03-12
<160> NUMBER OF SEQ ID NOS: 28
<170> SOFTWARE: FastSEQ for Windows Version 4.0
<210> SEQ ID NO: 1
<211> LENGTH: 1361
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: modified enhancer
<400> SEQUENCE: 1

caacatggtg gagcacgaca ctctcgtcta ctccaagaat atcaaagata cagtctcaga 60
agaccagagg gctattgaga cttttcaaca aagggtaata tcgggaaacc tcctcggatt 120
ccattgccca gctatctgtc acttcatcga aaggacagta gaaaaggaag atggcttcta 180
caaatgccat cattgcgata aaggaaaggc tatcgttcaa gatgcctcta ccgacagtgg 240
tcccaaagat ggacccccac ccacgaggaa catcgtggaa aaagaagacg ttccaaccac 300
gtcttcaaag caagtggatt gatgtgatat ctagatcccc aacatggtgg agcacgacac 360
tctcgtctac tccaagaata tcaaagatac agtctcagaa gaccagaggg ctattgagac 420
ttttcaacaa agggtaatat cgggaaacct cctcggattc cattgcccag ctatctgtca 480
cttcatcgaa aggacagtag aaaaggaaga tggcttctac aaatgccatc attgcgataa 540
aggaaaggct atcgttcaag atgcctctac cgacagtggt cccaaagatg gacccccacc 600
cacgaggaac atcgtggaaa aagaagacgt tccaaccacg tcttcaaagc aagtggattg 660
atgtgatatc tagatcccca acatggtgga gcacgacact ctcgtctact ccaagaatat 720
caaagataca gtctcagaag accagaggge tattgagact tttcaacaaa gggtaatatc 780
gggaaacctc ctcggattcc attgcccagc tatctgtcac ttcatcgaaa ggacagtaga 840
aaaggaagat ggcttctaca aatgccatca ttgcgataaa ggaaaggcta tcgttcaaga 900
tgcctctacc gacagtggtc ccaaagatgg acccccaccc acgaggaaca tcgtggaaaa 960
agaagacgtt ccaaccacgt cttcaaagca agtggattga tgtgatatct agatccccaa 1020
catggtggag cacgacactc tcgtctactc caagaatatc aaagatacag tctcagaaga 1080
ccagagggct attgagactt ttcaacaaag ggtaatatcg ggaaacctcc tcggattcca 1140
ttgcccagct atctgtcact tcatcgaaag gacagtagaa aaggaagatg gcttctacaa 1200
atgccatcat tgcgataaag gaaaggctat cgttcaagat gcctctaccg acagtggtcc 1260
caaagatgga cccccaccca cgaggaacat cgtggaaaaa gaagacgttc caaccacgtc 1320
ttcaaagcaa gtggattgat gtgatatcta gatccgaaac t 1361

<210> SEQ ID NO: 2
<211> LENGTH: 202
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

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<220> FEATURE:
<223> OTHER INFORMATION: enhancer fragment
<400> SEQUENCE: 2
agctatctgt cacttcatcg aaaggacagt agaaaaggaa gatggcttct acaaatgcca 60
tcattgcgat aaaggaaagg ctatcgttca agatgcctct accgacagtg gtcccaaaga 120
tggacccccа cccacgagga acatcgtgga aaaagaagac gttccaacca cgtcttcaaa 180
gcaagtggat tgatgtgata tc 202
<210> SEQ ID NO: 3
<211> LENGTH: 129
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: enhancer fragment
<400> SEQUENCE: 3
caacatggtg gagcacgaca ctctcgtcta ctccaagaat atcaaagata cagtctcaga 60
agaccagagg gctattgaga cttttcaaca aagggtaata tcgggaaacc tcctcggatt 120
ccattgccc 129
<210> SEQ ID NO: 4
<211> LENGTH: 7
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: enhancer fragment
<400> SEQUENCE: 4
agatccc 7
<210> SEQ ID NO: 5
<211> LENGTH: 313
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: promoter fragment
<400> SEQUENCE: 5
agctggcttg tgggaccag acaaaaaagg aatggtgcag aattgttagg cgcacctacc 60
aaaagcatct ttgcctttat tgcaaagata aagcagattc ctctagtaca agtggggaac 120
aaaataacgt ggaaaagagc tgtcctgaca gcccactcac taatgcgtat gacgaacgca 180
gtgacgacca caaaagaatt ccctctatat aagaaggcat tcattcccat ttgaaggatc 240
atcagatact gaaccaatat ttctcactct aagaaattaa gagctttgta ttcttcaatg 300
agaggctaag acc 313
<210> SEQ ID NO: 6
<211> LENGTH: 207
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: enhancer fragment
<400> SEQUENCE: 6
gtcaacatcg agcagctggc ttgtggggac cagacaaaaa aggaatggtg cagaattgtt 60
aggcgcacct accaaaagca tctttgcctt tattgcaaag ataaagcaga ttcctctagt 120
acaagtgggg aacaaaataa cgtggaaaag agctgtcctg acagcccact cactaatgcg 180
tatgacgaac gcagtgacga ccacaaa 207

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Input Set : A:\4257-0018.30-SEQLIST.TXT
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<210> SEQ ID NO: 7
<211> LENGTH: 250
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: enhancer fragment
<400> SEQUENCE: 7
gagatcttga gccaatcaaa gaggagtgat gtagacctaa agcaataatg gagccatgac 60
gtaagggctt acgccattac gaaataatta aaggctgatg tgacctgtcg gtctctcaga 120
acctttactt tttatatttg gcgtgtattt ttaaatttcc acggcaatga cgatgtgacc 180
tgtgcatccg ctttgcctat aaataagttt tagtttgtat tgatcgacac gatcgagaag 240
acacggccat 250
<210> SEQ ID NO: 8
<211> LENGTH: 360
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: promoter fragment
<400> SEQUENCE: 8
ttcgtccaca gacatcaaca tcttatcgtc ctttgaagat aagataataa tgttgaagat 60
aagagtggga gccaccacta aaacattgct ttgtcaaaag ctaaaaaaga tgatgcccga 120
cagccacttg tgtgaagcat gtgaagccgg tccctccact aagaaaatta gtgaagcatc 180
ttccagtggt ccctccactc acagctcaat cagtgagcaa caggacgaag gaaatgacgt 240
aagccatgac gtctaatccc acaagaattt ccttatataa ggaacacaaa tcagaaggaa 300
gagatcaatc gaaatcaaaa tcggaatcga aatcaaaatc ggaatcgaaa tctctcatct 360
<210> SEQ ID NO: 9
<211> LENGTH: 24
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 9
agcggataac aatttcacac agga 24
<210> SEQ ID NO: 10
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 10
ttattttcttg agggcctcga 20
<210> SEQ ID NO: 11
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 11
cggcaatgta ccagctgata 20

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Input Set : A:\4257-0018.30-SEQLIST.TXT
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<210> SEQ ID NO: 12
<211> LENGTH: 19
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 12
gatccccaac atggtggag 19
<210> SEQ ID NO: 13
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 13
cacatcaatc cacttgcttt g 21
<210> SEQ ID NO: 14
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 14
actacgatac gggagggctt 20
<210> SEQ ID NO: 15
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 15
ctggcgtaat agcgaagagg 20
<210> SEQ ID NO: 16
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 16
tgacatgctc caaattccaa 20
<210> SEQ ID NO: 17
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 17
cttggcattg ggatcaaact 20
<210> SEQ ID NO: 18

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Input Set : A:\4257-0018.30-SEQLIST.TXT
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<211> LENGTH: 22
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 18
tttctttcac agatccgagt ca 22
<210> SEQ ID NO: 19
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 19
ttctccacac tgcagattcg 20
<210> SEQ ID NO: 20
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 20
gaggattgcc caaaaccata 20
<210> SEQ ID NO: 21
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 21
ttttgggtgc aaaaacatca 20
<210> SEQ ID NO: 22
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 22
taatacgact cactataggg 20
<210> SEQ ID NO: 23
<211> LENGTH: 22
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide primer
<400> SEQUENCE: 23
cgaggatatg aaatctcttg cc 22
<210> SEQ ID NO: 24
<211> LENGTH: 21

VERIFICATION SUMMARY DATE: 11/08/2000
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